

## ABSTRACT OF THE DISCLOSURE

Methods for treating a mammal with lymphoma using a combination of interleukin-2 (IL-2) or variant thereof and at least one anti-CD20 antibody or fragment thereof are provided. These anti-tumor agents are administered as two separate  
5 pharmaceutical compositions, one containing IL-2 (or variant thereof), the other containing at least one anti-CD20 antibody (or fragment thereof), according to a dosing regimen. Administering of these two agents together potentiates the effectiveness of either agent alone, resulting in a positive therapeutic response that is improved with respect to that observed with either agent alone. The anti-tumor effects of these agents  
10 can be achieved using lower dosages of IL-2, thereby lessening the toxicity of prolonged IL-2 administration and the potential for tumor escape.